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PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

REC'D 08 DEC 2004
WIPO PCT

Applicant's or agent's file reference T3403-802778	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US03/00260	International filing date (day/month/year) 07 January 2003 (07.01.2003)	Priority date (day/month/year) 07 January 2002 (07.01.2002)
International Patent Classification (IPC) or national classification and IPC IPC(7): D01C 3/00; D06P 5/00; C09B 67/00; B05D 1/28; D06M and US Cl.: 8/94.11, 490, 501, 583; 427/428; 252/8.6		
Applicant LONG, JACK W		

- This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
- This REPORT consists of a total of 3 sheets, including this cover sheet.
☐ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).
These annexes consist of a total of sheets.

- This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of report with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 09 August 2004 (09.08.2004)	Date of completion of this report 03 November 2004 (03.11.2004)
Name and mailing address of the IPEA/US Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230	Authorized officer Yogendra N. Gupta Telephone No. 571-272-1700 DEBORAH A. THOMAS PARALEGAL SPECIALIST -GROUP 1300- Dat

Form PCT/IPEA/409 (cover sheet)(July 1998)

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US03/00260

I. Basis of the report

1. With regard to the elements of the international application:*

- ☒ the international application as originally filed.
- ☒ the description:
pages 1-7 as originally filed
pages NONE, filed with the demand
pages NONE, filed with the letter of _____.
- ☒ the claims:
pages 8-10, as originally filed
pages NONE, as amended (together with any statement) under Article 19
pages NONE, filed with the demand
pages NONE, filed with the letter of _____.
- ☐ the drawings:
pages NONE, as originally filed
pages NONE, filed with the demand
pages NONE, filed with the letter of _____.
- ☐ the sequence listing part of the description:
pages NONE, as originally filed
pages NONE, filed with the demand
pages NONE, filed with the letter of _____.

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in printed form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages NONE
- ☐ the claims, Nos. NONE
- ☐ the drawings, sheets/~~figs~~ NONE

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/US03/00260**V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement****1. STATEMENT**

Novelty (N)	Claims <u>1-15</u>	YES
	Claims <u>NONE</u>	NO
Inventive Step (IS)	Claims <u>1-15</u>	YES
	Claims <u>NONE</u>	NO
Industrial Applicability (IA)	Claims <u>1-15</u>	YES
	Claims <u>NONE</u>	NO

2. CITATIONS AND EXPLANATIONS

Claims 1-15 meet the criteria set out in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest an composition comprising Permethrin, an emulsifier and an effective amount of an antimicrobial agent comprising a blend of substituted ammonium salts of alkylated phosphoric acids admixed with free alkylated phosphoric acid.

Abel et al. (US 4,460,374) illustrate in example 11, a composition comprising permethrin without the a blend of substituted ammonium salts of alkylated phosphoric acids admixed with free alkylated phosphoric acid because the broad teachings of Abel et al. suggest It would not have been obvious to modify the teaching of Abel et al. with the required a blend of substituted ammonium salts of alkylated phosphoric acids admixed with free alkylated phosphoric acid because the broad teachings of Abel et al. suggest that the acids are aliphatic monocarboxylic acids of 1 to 5 carbon atoms, e.g. formic acid, acetic acid, propionic acid, butyric acid, acrylic acid, methacrylic acid, dimethylacrylic acid, halogenated acetic acids such as monochloroacetic acid, dichloroacetic acid or trifluoroacetic acid, hydroxyacetic acid, glycolic acid or lactic acid; cycloaliphatic monocarboxylic acids such as cyclohexanecarboxylic acid; araliphatic carboxylic acids such as phenylacetic acid; aromatic monocarboxylic acids such as benzoic acid, naphthoic acid, salicylic acid, m- or p-hydroxybenzoic acid or nicotinic acid; aliphatic dicarboxylic or tricarboxylic acids such as oxalic acid, malonic acid, succinic acid, glutaric acid, adipic acid, citric acid, malic acid, maleic acid, methylmaleic acid; and also methanesulfonic acid, ethanesulfonic acid, trifluoromethanesulfonic acid, benzenesulfonic acid, alkylbenzenesulfonic acid, e.g. dodecylbenzenesulfonic acid, citraconic anhydride, sulfamic acid or phosphoric acid, as well as monoalkyl or dialkyl ester of phosphoric acid, the alkyl moieties of which esters may contain 1 to 12, preferably 3 to 8, carbon atoms. See col.5-6.

Becker et al. (US 4,559,150) suggest the use of diammonium phosphate in a composition comprising pyrethroids such as permethrin, however, one of ordinary skill in the art would not have been motivated to arrive at a composition comprising permethrin and a blend of substituted ammonium salts of alkylated phosphoric acids admixed with free alkylated phosphoric acid because the broad teachings of Becker et al. suggest a various acids for use in biocidal compositions. See col.5-6.

De Sousa et al. (US 4,602,912) suggest a mothproofing composition comprising permethrin and an alkyl ester of phosphoric acid. However, De Sousa et al. do not teach the required blend of substituted ammonium salts of alkylated phosphoric acids admixed with free alkylated phosphoric acid. The broad teachings of De Sousa et al. suggest phosphoric and phosphonic acid esters in general. However, one of ordinary skill in the art would not be motivated to modify the teaching of De Sousa et al. to arrive at the required blend of substituted ammonium salts of alkylated phosphoric acids admixed with free alkylated phosphoric acid because the broad teachings of De Sousa et al. suggest a composition comprising permethrin with a fatty acid ethoxylate and a alkyl ester of phosphoric acid. See example 7, col.28.

Claims 1-15 meet the criteria set out in PCT Article 33(4), and thus meet industrial applicability because the subject matter claimed can be made or used in industry.

----- NEW CITATIONS -----